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Lieferung & Zahlungsart

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- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

MYH14 siRNA (m): sc-149739

BACKGROUND

Actin is a highly conserved protein that is expressed in all eukaryotic cells. Actin filaments can form both stable and labile structures and are crucial components of microvilli and the contractile apparatus of muscle cells. Myosin is a hexamer of 2 heavy chains (MHC) and 4 light chains (MLC) that interacts with Actin to generate the force for diverse cellular movements, including cytokinesis, phagocytosis and muscle contraction. MYH14 (myosin, heavy chain 14), also known as myosin-14, non-muscle myosin heavy chain IIcDFNA4, MHC16, myosin, FLJ13881, FLJ43092, FP17425, KIAA2034, NMHC-II-C or DKFZp667A1311, is a 1,995 amino acid protein belonging to the non-muscle myosin II family. MYH14 contains an N-terminal myosin domain, a C-terminal myosin tail, a myosin head region and two IQ domains. Four MYH14 isoforms exist as a result of alternative splicing and MYH14 is highly expressed in skeletal muscle, small intestine and colon. A form of sensorineural hearing loss known as non-syndromic sensorineural deafness autosomal dominant type 4 (DFNA4), is caused by MYH14 defects.

REFERENCES

1. Chen, A.H., et al. 1995. Linkage of a gene for dominant non-syndromic deafness to chromosome 19. Hum. Mol. Genet. 4: 1073-1076.
2. Leal, A., et al. 2003. A novel myosin heavy chain gene in human chromosome 19q13.3. Gene 312: 165-171.
3. Donaudy, F., et al. 2004. Non-muscle myosin heavy-chain gene MYH14 is expressed in cochlea and mutated in patients affected by autosomal dominant hearing impairment (DFNA4). Am. J. Hum. Genet. 74: 770-776.
4. Golomb, E., et al. 2004. Identification and characterization of non-muscle myosin II-C, a new member of the myosin II family. J. Biol. Chem. 279: 2800-2808.
5. Kim, K.Y., et al. 2005. Disease-associated mutations and alternative splicing alter the enzymatic and motile activity of non-muscle myosins II-B and II-C. J. Biol. Chem. 280: 22769-22775.

CHROMOSOMAL LOCATION

Genetic locus: Myh14 (mouse) mapping to 7 B4.

PRODUCT

MYH14 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MYH14 shRNA Plasmid (m): sc-149739-SH and MYH14 shRNA (m) Lentiviral Particles: sc-149739-V as alternate gene silencing products.

For independent verification of MYH14 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-149739A, sc-149739B and sc-149739C.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MYH14 siRNA (m) is recommended for the inhibition of MYH14 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MYH14 gene expression knockdown using RT-PCR Primer: MYH14 (m)-PR: sc-149739-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.